Title: APPARATUS AND METHOD FOR SPATIALLY AND TEMPORALLY DISTRIBUTING CARDIAC ELECTRICAL STIMULATION

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended)

A method for operating a cardiac pacing device, comprising:

sensing a parameter related to cardiac output:

outputting pacing pulses to a selected subset of a plurality of pacing electrodes in accordance with a programmed pacing mode, wherein the subset of electrodes to which pulses are output is defined by a pulse output configuration; and,

switching the pulse output configuration utilized for one or more cardiac cycles to another pulse output configuration for one or more subsequent cardiac cycles in accordance with a switching algorithm dependent upon the sensed parameter related to cardiac output that comprises switching the pulse output configuration at specified time intervals.

- 2. (Currently Amended) The method of claim 1 further comprising sensing intra-throraeie impedance to derive the a parameter related to cardiac output and wherein the switching algorithm further comprises switching the pulse output configuration in a manner dependent upon the sensed parameter related to cardiac output.
- 3. (Original) The method of claim 1 further comprising outputting non-excitatory stimulation pulses to selected electrodes in conjunction with pacing pulses.
- 4-6. (Canceled)
- 7. (Original) The method of claim 1 wherein a pulse output configuration is further defined as a temporal sequence of pulses output to the fixed electrodes during a cardiac cycle.
- 8. (Original) The method of claim 1 wherein the stimulation pulses are output to a bipolar electrode having tip and ring electrodes disposed near a heart chamber, and further comprising switching the pulse output configuration by alternating the polarity of the delivered pulses.

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- 9. (Original) The method of claim 1 further comprising switching the pulse output configuration in accordance with the mean or minimum heart rate measured over a time interval.
- 10. (Original) The method of claim 1 further comprising switching the pulse output configuration in accordance with a sensed time delay of a depolarization occurring in an area of the myocardium after delivery of a pacing pulse.
- 11. (Currently Amended) A cardiac pacemaker, comprising:
 - a plurality of electrodes adapted for disposition near a heart chamber;
- a plurality of defined pulse output configurations, wherein each pulse output configuration constitutes a subset of the plurality of the electrodes;

a sensor for sensing a parameter related to cardiac output;

a control unit and pulse generating circuitry for outputting pacing pulses to a selected one of the plurality of pulse output configurations in accordance with a programmed mode;

wherein the control unit is programmed to utilize a first pulse output configuration during one or more cardiac cycles and switch to a second pulse output configuration during one or more subsequent cardiac cycles in accordance with a switching algorithm dependent upon the sensed parameter related to cardiac output that comprises switching the pulse output configuration at specified time intervals.

- 12. (Currently Amended) The pacemaker of claim 11 further comprising intra-throracie impedance sensor for sensing the to a sensor for sensing a parameter related to cardiac output and wherein the switching algorithm further comprises switching the pulse output configuration in a manner dependent upon the sensed parameter related to cardiac output.
- 13. (Original) The pacemaker of claim 11 further comprising circuitry for outputting non-excitatory stimulation pulses to selected electrodes in conjunction with pacing pulses.

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- 17. (Original) The pacemaker of claim 11 wherein a pulse output configuration is further defined as a temporal sequence of pulses output to the fixed electrodes during a cardiac cycle.
- 18. (Original) The pacemaker of claim 11 further comprising a bipolar electrode having tip and ring electrodes for disposition near a heart chamber, and wherein the pulse output configuration is switched by alternating the polarity of the delivered pulses.
- 19. (Original) The pacemaker of claim 11 wherein the switching algorithm further comprises switching the pulse output configuration in accordance with the mean or minimum heart rate measured over a time interval.
- 20. (Original) The pacemaker of claim 11 wherein the switching algorithm further comprises switching the pulse output configuration in accordance with a sensed time delay of a depolarization occurring in an area of the myocardium after delivery of a pacing pulse.
- 21. (New) A method for operating a cardiac pacing device, comprising: outputting pacing pulses to a selected subset of a plurality of pacing electrodes in accordance with a programmed pacing mode, wherein the subset of electrodes to which pulses are output is defined by a pulse output configuration; and,

switching the pulse output configuration utilized for one or more cardiac cycles to another pulse output configuration for one or more subsequent cardiac cycles in accordance with a switching algorithm that comprises switching the pulse output configuration after a specified number of heart beats.

The method of claim 21 further comprising sensing a parameter related to cardiac 22. (New) output and wherein the switching algorithm further comprises switching the pulse output configuration in a manner dependent upon the sensed parameter related to cardiac output.

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23. (New) A cardiac pacemaker, comprising:

- a plurality of electrodes adapted for disposition near a heart chamber;
- a plurality of defined pulse output configurations, wherein each pulse output configuration constitutes a subset of the plurality of the electrodes;
- a control unit and pulse generating circuitry for outputting pacing pulses to a selected one of the plurality of pulse output configurations in accordance with a programmed mode;

wherein the control unit is programmed to utilize a first pulse output configuration during one or more cardiac cycles and switch to a second pulse output configuration during one or more subsequent cardiac cycles in accordance with a switching algorithm that comprises switching the pulse output configuration after a specified number of heart beats.

24. (New) The pacemaker of claim 23 further comprising a sensor for sensing a parameter related to cardiac output and wherein the switching algorithm further comprises switching the pulse output configuration in a manner dependent upon the sensed parameter related to cardiac output.